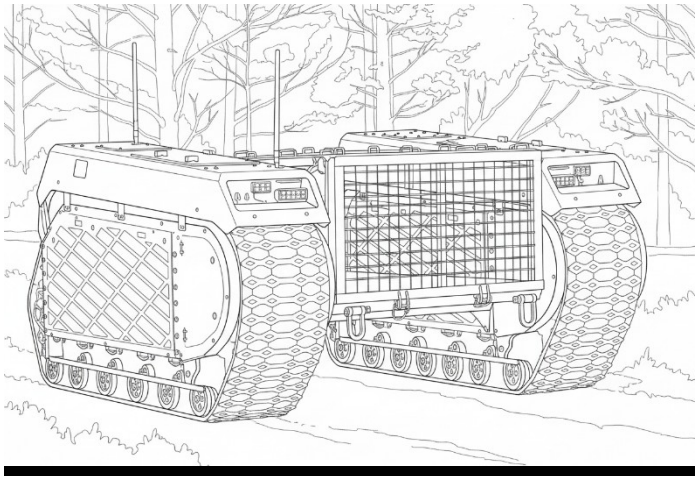
Milrem Robotics THeMIS



Tracked Hybrid Modular Infantry System — Estonia

Identity & Designation

Designation: THeMIS (Tracked Hybrid Modular Infantry System)
Manufacturer: Milrem Robotics (Tallinn, Estonia); majority owned by EDGE Group (UAE)
Country of Origin: Estonia
Unit Cost: Classified; estimated $200,000–$500,000 depending on configuration
Development Status: Full production. 19+ customer nations. 200+ units ordered/delivered. 150+ units ordered for Ukraine (Dutch-led, Oct 2025).

Classification

Primary Mission: Modular infantry support: transport, CASEVAC, combat, EOD, ISR

Alternate Roles: C-UAS (with LOKI RCWS); loitering munition carrier (Hunter 2-S swarming drones); SHORAD (Saab MSHORAD); mortar carrier (81mm)

Domain: Land (tracked UGV)

Size Class: Medium (1,650 kg curb weight)

Physical Specifications

Dimensions: Approx. 2.4 m L × 2.0 m W × 1.1 m H (transport config)

Curb Weight: 1,650 kg (3,638 lb)

Rated Payload: 750 kg (1,653 lb); max payload 1,200 kg (2,646 lb)

Pull Force: 15 kN (can tow loaded trailer)

Chassis: Tracked; two crawler tracks with central modular bay

Propulsion & Performance

Propulsion: Hybrid: diesel generator + battery pack powering electric track motors

Max Speed: 20 km/h (12.4 mph)

Endurance: Up to 15 hours (hybrid mode); 90 minutes battery-only (silent mode)

Gradient: 60% slope

Obstacle Clearance: 90 cm vertical

Fording Depth: 0.6 m

Operating Temp: Tested in Arctic conditions (US Army CRREL)

Power Output: 3 kW at 28 Vdc (peak 125 A) — can serve as field power source

Guidance, Navigation & Control

Control: Remote operated + MIFIK Intelligent Functions Kit for autonomous navigation

Navigation: GPS/INS + autonomous waypoint navigation; AI-enhanced terrain sensing

Autonomy Level: Tele-operated to semi-autonomous (follow-me, waypoint, obstacle avoidance)

CM Convergence: PLATFORM-AS-LAUNCHER — THeMIS chassis integrates Halcon Hunter 2-S swarming loitering munitions, Saab MSHORAD air defense, and Moog FMP missile launchers. A single

chassis can shift from logistics mule to anti-armor strike to air defense. This is the land equivalent of Magura V5's evolution from kamikaze boat to multi-role naval platform.

Weapons & Payloads

RCWS Options: LOKI (5.56–12.7mm, 2,000m engagement range); EOS R400 series; Kongsberg PROTECTOR; FN Herstal deFNder

Anti-Armor: ATGM integration (Javelin, Spike compatible via weapon station)

C-UAS: LOKI RCWS in C-UAS mode; Saab MSHORAD integration

Swarming: Halcon Hunter 2-S tactical swarming drones (AI target ID, autonomous engagement)

Modular Configs: Transport/cargo, CASEVAC (stretcher), combat (RCWS), EOD, ISR, EW, mortar carrier, loitering munition carrier

Countermeasure Vulnerability Profile

RF Jamming: MEDIUM-HIGH — Remote control link susceptible; autonomous mode mitigates but limits capability

GPS Denial: MEDIUM — INS backup for autonomous nav; degraded but functional under GPS denial

HPM / EMI: MEDIUM — Military electronics with some hardening; hybrid drive electronics present vulnerability surface

Kinetic: LOW-MEDIUM — Low profile, small target. No armor in base config; vulnerable to RPG, IED, anti-materiel rifle.

Signatures

Acoustic: LOW (electric drive, near-silent).

IR: LOW-MEDIUM (diesel generator when running).

Visual: MEDIUM (tracked vehicle visible on open ground).

Radar: LOW (small RCS).

Hardening: Military-grade electronics with partial EMI hardening. Not MIL-STD-461 rated in base config.

Operational History

Operators: Estonia, Netherlands, Germany, France, Norway, UK, US, UAE, Ukraine, Australia, Spain + 8 more

Combat Use: Ukraine (2022–present): CASEVAC and logistics. First combat-deployed modular UGV at scale.

Key Milestones: Sep 2022: Delivered to Ukraine. Oct 2025: 150+ units ordered (Dutch initiative). Nov 2025: THeMIS-K joint development with Hanwha (South Korea). Jan 2024: $200M UAE contract (60 UGVs).

Variants: THeMIS Transport, THeMIS Combat, THeMIS ISR, THeMIS EOD, THeMIS CASEVAC, THeMIS Observe, THeMIS-K (Korean variant), HAVOC RCV (larger robotic combat vehicle)

Sources & Cross-References

Primary Sources: Milrem Robotics official, Janes, Army Recognition, Army Technology, EDR Magazine, Shephard Media

Confidence Level: HIGH — Multiple NATO procurement programs; combat-verified in Ukraine; 200+ units fielded

Cross-References: Compare: Ripsaw M5 (heavier class), Ghost Robotics Vision 60 (quadruped), Anduril Bolt (interceptor). See Land Domain chapter.